

**Fw: PECs**

**Dana Davoli** to: Kristine Koch, Elizabeth McKenna  
Cc: Bruce Duncan, danadavoli

01/17/2007 01:57 PM

History: This message has been replied to.

I talked to Bruce Duncan and based upon the following definitions of PEC, he felt it would be appropriate to use the terms "imminent hazard and substantial endangerment" (is that the right language?) for ecological effects. Please let me know if you want me to write something up for you. Or send me what you write and I'll show it to Bruce.

"In contrast to the TECs, the consensus-based PECs are intended to define the concentrations of sediment-associated contaminants above which adverse effects on sediment-dwelling organisms are likely to be observed."

"the PECs should be used to identify sediments that are likely to be toxic to sediment-dwelling organisms."

----- Forwarded by Dana Davoli/R10/USEPA/US on 01/17/2007 01:38 PM -----



**Bruce  
Duncan/R10/USEPA/US**  
01/17/2007 01:10 PM

To: Dana Davoli/R10/USEPA/US@EPA  
cc  
Subject: PECs

Dana - hope this helps:

Quotes from:

D. D. MacDonald, C. G. Ingersoll, T. A. Berger  
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems  
Journal Archives of Environmental Contamination and Toxicology  
Publisher Springer New York  
ISSN 0090-4341 (Print) 1432-0703 (Online)  
Subject Chemistry and Materials Science and Earth and Environmental Science  
Issue Volume 39, Number 1 / June, 2000  
DOI 10.1007/s002440010075  
Pages 20-31

<http://www.springerlink.com/content/89h1txc7f5a07ybc/fulltext.pdf>

"sediment toxicity should be observed only rarely below the TEC and should be frequently observed above the PEC)."

"the individual PEC for each substance was considered to be reliable if greater than 75% of the sediment samples were correctly predicted to toxic using the PEC"

"Table 3. Sediment quality guidelines for metals in freshwater ecosystems that reflect PECs (i.e., above which harmful effects are likely to be observed)"

"In contrast to the TECs, the consensus-based PECs are intended to define the concentrations of

sediment-associated contaminants above which adverse effects on sediment-dwelling organisms are likely to be observed."

"the PECs should be used to identify sediments that are likely to be toxic to sediment-dwelling organisms."

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